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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/694,913	10/29/2003	Gen Sasaki	244176US2 DIV	4521
22850	7590	05/02/2007	EXAMINER	
OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			TRAN, NHAN T	
ART UNIT		PAPER NUMBER		
2622				
NOTIFICATION DATE		DELIVERY MODE		
05/02/2007		ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/694,913	SASAKI, GEN	
	<b>Examiner</b>	<b>Art Unit</b>	
	Nhan T. Tran	2622	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 3/12/2007 & 4/11/2007.  
 2a) This action is FINAL.                    2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 15,16 and 28 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 15,16 and 28 is/are rejected.  
 7) Claim(s) \_\_\_\_\_ is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
     1. Certified copies of the priority documents have been received.  
     2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
     3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 3/12/2007 & 4/11/2007 has been entered.

### ***Response to Arguments***

2. Applicant's arguments with respect to claim 15 have been considered but are moot in view of the new ground of rejection.

Upon further consideration, the allowability of claims 16 & 28 are withdrawn as they read on the teachings of Fukushima and Kapan set forth below.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

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3. Claims 15, 16 & 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fukushima et al. (US 4,893,185) in view of Kapan (US 5,291,293).

Regarding claim 15, Fukushima discloses an image processing circuit (Fig. 2) of an image input device which performs a predetermined image processing (sample and hold, defective correction, etc.) of an image photographed by an image pickup device having a pixel array (CCD 3) in said image input device (col. 1, lines 9-15 and col. 4, lines 10-17), said circuit comprising:

a real time processing unit (combined circuits 4, 14 and 11 which is presented by all circuits within loop 1154 shown in Fig. 2) in which a predetermined general image processing of a pixel data in the image photographed by said image pickup device and inputted sequentially (pixel by pixel) is performed by real time processing (see col. 4, lines 10-17);

a main memory (212) disposed outside of said real time processing unit that stores defective pixel addresses in a pixel array sequence order having an order of the pixel array in said image input device (Figs. 2 & 3; col. 1, lines 60-67; col. 2, lines 30-33 and col. 3, lines 47-52, wherein the defective addresses of A1 and A2 are stored in a pixel array sequence), wherein said real time processing unit further comprises a defective pixel compensation block (combined circuits of 14 and circuits within loop 1154) that reads the defective pixel addresses stored in said main memory arranged in the pixel array sequence order, and performs defective pixel compensation when a pixel address of a pixel data residing in the image matches said defective pixel address, said

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defective pixel compensation performed in the pixel array sequence order (see col. 3, line 13 – col. 4, line 40), and said defective pixel compensation block of said real time processing unit comprises a shift register with a plurality of registers (101-106) connected in series, to which the defective pixel addresses stored in said memory are inputted sequentially and outputted sequentially (see Fig. 2 and col. 3, line 28 – col. 4, line 40).

Fukushima is silent about that the main memory also stores a pixel data outputted from at least said real time processing unit in image frame units.

However, it is well recognized by Kapan that both defective pixel addresses and image data can be stored in a single memory (36) so as to reduce a number of separate memories and thus simplifying circuitry. See Kapan, Fig. 2 and col. 2, lines 59-61 and col. 4, lines 19-27.

Therefore, it would have been obvious to one of ordinary skill in the art to modify the imaging apparatus in Fukushima by storing pixel data outputted from the real time processing unit, in image frame units, in the same memory that stores defective pixel addresses as suggested by Kapan so as to reduce a number of separate memories and thus simplifying circuitry.

Regarding claim 16, Fukushima further discloses that the defective pixel compensation block comprises: a comparator (108-110 shown in Fig. 2) connected to a rearmost stage of said shift register (101-106) in which an address count value of a pixel data inputted sequentially is compared with a defective pixel address provided

from said rearmost stage and, when a match is found, a defective pixel timing signal is outputted, said shift register holds a defective pixel address, and output of said rearmost stage is looped (loop back at 106) to an input terminal of a foremost stage, said comparator is a comparator in which an address count value of a pixel data inputted sequentially is compared with a defective pixel address provided from said rearmost stage and, when a match is found, a shift timing signal and a defective pixel timing signal are outputted, and shift of said shift register is executed by said shift timing signal (shift enable signal 1154) provided from said comparator (by virtue of the flip-flop 142).

See Fukushima, Fig. 2 and col. 3, line 28 – col. 5, line 14.

Regarding claim 28, all limitations of claim 28 are also met by the analyses of claims 15 & 16.

### ***Conclusion***

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nhan T. Tran whose telephone number is (571) 272-7371. The examiner can normally be reached on Monday - Friday, 8:00am - 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Ometz can be reached on (571) 272-7593. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



NHAN T. TRAN  
Patent Examiner